Cobra®

Cobra 2000GTL
40-Channel
Solid State Citizens Band
SSB/AM Two-Way Radio
Base Station
With Separate Speaker Cabinet

Cobra Communications Product Group
DYNASCAN CORPORATION
6460 W. Cortland Street
Chicago, Illinois 60635

Dear CB'er:

Welcome to the expanding family of users of Cobra Communications equipment.

I hope you will find your Two-Way Radio Communications experience to be as exciting as it is practical. Whatever the purpose of your radio system, Cobra equipment is reliable and a pleasure to use. Dynascan takes special care to provide you with equipment that is compact, handsomely styled, and thoroughly dependable. Many years of valuable experience designing test equipment and other electronic products are behind our two-way communications systems. Premium quality solid-state components and integrated circuits are incorporated into Cobra radios to assure high performance and long life. Special attention is given to each detail to bring you the finest CB radio on the market today because we know that you take pride in your communication equipment.

If you have any comments or suggestions about Cobra, please send them to us. Communications is our business, and it is very important that we communicate with you.

Thank you for your confidence in Cobra two-way radio equipment. We hope you will consider our other fine Cobra products as the need arises.

Sincerely,

Carl Korn

Carl Korn
President

INSTRUCTION MANUAL

for

Cobra 2000GTL

40-Channel

Citizens Band Solid State

SSB/AM Two-Way Radio

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WARNING – TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

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THE CB STORY

The Citizens Band lies between the shortwave broadcast and 10-meter amateur radio bands, and was established by law in 1949. The Class D two-way communications service was opened in 1959. (CB also includes a Class A business band and Class C remote control frequencies.) Acquiring the CB license requires no detailed technical or Morse-code knowledge that is required for a "Ham" license.

Although the FCC has eliminated the requirement for the $4.00 CB license fee, a license is still required. Filing procedure remains unchanged. One license can be good for any number of sets used by a given family or business. Once you receive your CB license for your equipment, anyone may use it.

For example, though the equipment must be licensed to someone over 18 years of age, a child can use the equipment to talk to another child, or an employee can use the equipment as part of his or her routine services. However, final responsibility of legal operation rests with the CB licensee.

NOTE

FCC regulations permit only "transmissions" (one party to another) rather than "broadcasts" (to a wide audience). Thus, advertising is not allowed on CB channels because it is broadcasting.

**HAVE
A GOOD DAY
TODAY
AND
A BETTER DAY
TOMORROW!**

Section I
Introduction

FREQUENCY RANGE

The COBRA 2000GTL transceiver represent the most advanced SSB/AM two-way radio ever designed for use in the Citizens Band Radio Service. The unit feature advanced Phase Lock Loop (PLL) circuitry which is used in the AM mode and in the upper and lower single sideband modes, providing complete coverage of all 40 channels shown below.

Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	27.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

The COBRA 2000GTL has a vastly superior receiver which includes RF gain control, Automatic Noise Limiting, and Noise Blanker circuitry which is effective in both AM and SSB modes. The receiver also feature increased protection against cross modulation and strong adjacent channel signals.

To obtain maximum performance from your transceiver, please read carefully the following descriptions and operating instructions.

WARNING

1. Operation of this equipment requires a valid Station License issued by the Federal Communications Commission. Do not transmit with your equipment until you have received your License or complied with procedures explained on FCC Temporary License Form 555-B. A copy of FCC Application Form 505, FCC Temporary License Form 555-B, and Part 95 of the FCC Plain English Rules, are packed with this combination transceiver for your convenience.

2. You are required to complete FCC License Application Form 505 and submit it to the FCC, Gettysburg, Pa. 17362, in order to receive your license.

3. You are required to read and understand Part 95 of the FCC Plain English Rules, before operating your station. FCC Rules require you to always have on hand a current copy of Part 95 of the FCC Rules, as part of your Station Records.

4. All transmitter adjustments other than those supplied by the manufacturer as front panel operating controls, must be made by, or under the supervision of, the holder of an FCC-issued 1st or 2nd Class Radio Operator License.

5. Replacement or substitution of crystals, transistors, regular diodes or other part of a unique nature, with parts other than those recommended by Dynascan, may cause violation of the technical regulations of Part 95 of the FCC Rules, or violation of the Type Acceptance requirements of Part 2 of the Rules.

Section II Specifications

GENERAL

Channels	40.
Frequency Range	26.965 to 27.405 MHz.
Frequency Control	Phase Locked Loop (PLL) synthesizer.
Frequency Tolerance	±130 Hz Typical.
Operating Temperature Range	–30°C to +50°C.
Microphone	Plug-in type; 600Ω dynamic.
Power Source	120V AC nominal. 13.8V DC nominal. (Positive or negative ground).
Power Consumption (120V AC)	*Transmit:* AM full mod., 65 watts. SSB 70 watts. *Receive:* Squelched, 30 watts. Full audio, 40 watts.
Current Drain (13.8V DC)	*Transmit:* AM and SSB., 2.2A DC (nominal). *Receive:* Full audio output, 1.1A DC (nominal). No signal, 0.65A DC (nominal).
Size	5″(H) x 15″(W) x 4-7/16″(D)
Weight	19½ pounds. (including speaker)
Antenna Connector	UHF, SO239.
Semiconductors	18 integrated circuits, 6 FETs, 76 transistors, 93 diodes, 12 LEDs and 1 SCR.
Meter 1	Illuminated; indicates relative power output and received signal strength.
Meter 2	Illuminated, indicates standing wave ratio and level of modulation.

TRANSMITTER

Power Output	AM, 4 watts. SSB, 12 watts, PEP.
Modulation	AM, high-and low-level Class B.
Intermodualtion Distortion	SSB: 3rd and 5th order, more than -25dB. 7th and 9th order, more than -35dB.
SSB Carrier Suppression	-55 dB Nominal.
Unwanted Sideband	-50 dB Nominal.
Frequency Response	AM and SSB: 300 to 2500 Hz.
Output Impedance	50 ohms, unbalanced.
SSB Filter	7.8 MHz, crystal lattice type:
Output Indicators	Meters show relative RF output power, percentage of modulation and SWR. "ON THE AIR" Transmit Indicator.

RECEIVER

Sensitivity	SSB: 0.25 μV for 10 dB (S+N)/N at greater than ½-watt of audio output. AM: 0.5 μV for 10 dB (S+N)/ at greater than ½-watt of audio output.
Selectivity	AM: 6 dB @3 KHz, 50 dB @9 KHz. SSB: 6 dB @1.1 KHz, 60 dB @2.3 KHz.
Image Rejection	More than 65 dB.
IF Frequency	AM: 7.8 MHz 1st IF, 455 KHz 2nd IF SSB: 7.8 MHz
Adjacent-Channel Rejection	60 dB AM & 70 dB SSB.
AM and SSB RF Gain Control	40 dB adjustable for optimum signal reception.
Automatic Gain Control (AGC)	Less than 10 dB change in audio output for inputs from 10 to 100,000 microvolts.
Squelch	Adjustable; threshold less than 0.5 μV.
ANL	Switchable.

Noise Blanker	RF type, effective on AM and SSB.
Voice Lock Range	±1.5 KHz. coarse ±500 Hz fine.
RF Gain Control	Adjustable for optimum signal reception.
Audio Output Power	4 watts into 8 ohm.
Frequency Response	300 to 2500 Hz.
Distortion	Less than 10% at 3 watts output.
Separate Speaker	8 ohms.
External Speaker (not supplied)	4 ~ 8 ohms.
Indicators	"Receive" indicator. Meter shows receive signal strength.
Headphone Output	8 ohm impedance, 10 mW output.
AUX Output	100K ohm impedance, approx. 300 mW output.

PA SYSTEM

Power output	4 watts into external speaker.
External speaker for PA	4 ~ 8 ohms. (not supplied)

CLOCK/COUNTER

Clock	Uses 60 Hz power line reference. May be used to sound alarm or turn on radio.
Counter	Displays transmit and receive frequency.

Section III
Installation

LOCATION

Prior to beginning operation of the transceiver, a basic installation must be prepared. Installation of the transceiver itself is a rather simple procedure.

In selecting the location for the unit, three basic factors must be considered.

1. Access to a 120V, 60 Hz power source.
2. The location must be convenient for running the antenna lead-in cable if an outside antenna installation is proposed.
3. AC-DC switch on rear panel-use "AC" for 120 volt operation and "DC" for battery operation.

BASE STATION ANTENNA

Since the maximum allowable power output of the transmitter is limited by the FCC, the antenna is the most important factor affecting transmission distance. Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element.

The recommended method of antenna tuning is to use the built in SWR meter to adjust the antenna tuning for minimum reflected power on channel 21.

The radio may be used with any type of 50-ohm base station antenna. A ground plane vertical antenna will provide the most uniform horizontal coverage. This type of antenna is best suited for communication with a mobile unit. For point-to-point operation where both stations are fixed, a directional beam will usually increase communicating range since this type of antenna concentrates transmitted energy in one direction. The beam antenna also allows the receiver to "listen" in only one direction thus reducing interfering signals.

Antenna height is an important factor when maximum range is desired. Keep the antenna clear of surrounding structures or foliage. FCC regulations for base station antenna height are:

1. Omni-directional antennas may not be higher than 60 feet above the ground when using a tower, mast or pole, and no higher than 20 feet above an existing structure.

2. Beam antennas may not be higher than 20 feet above the ground when using a tower, mast, pole, or an existing structure.

These are only general regulations applicable to most but not all parts of the nation. Locations near airports and some military installations are subject to different rules; therefore, it is best to contact your nearest Federal Communications Commission office for information regarding your specific area.

MOBILE OPERATION/EMERGENCY POWER OPERATION

It is possible to operate the COBRA 2000GTL from an external 13.8V DC power supply for emergency power conditions or from an automobile battery for mobile operation. The COBRA 2000GTL is supplied with a polarized plug for operation on an external DC supply.

The negative lead is black.

The positive lead is red and has an in-line fuse holder as an integral part of the positive lead.

AC-DC switch on rear panel-use "AC" for 120 volt operation and "DC" for battery operation.

PUBLIC ADDRESS

An external 8-ohm, 4-watt speaker may be connected to the PA speaker jack located on the rear panel when the transceiver is used as a public address system. The speaker should be directed away from the microphone to prevent acoustic feed-back. Physical separation or isolation of the microphone and speaker must be used when operating the PA at high-output levels.

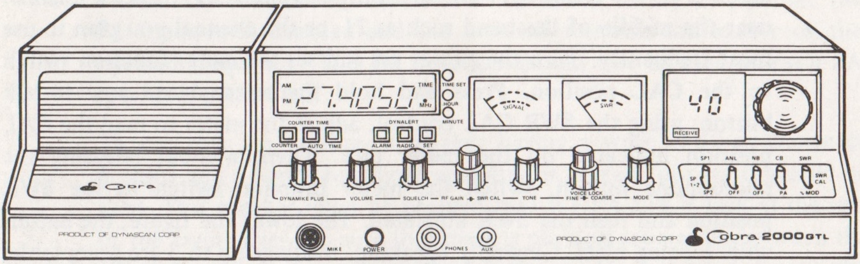
REMOTE SPEAKER

The external speaker jack (SP1 and SP2) are located on the rear panel. An external speaker should have 8 ohms impedance and be able to handle at least 4 watts. Use one jack for speaker supplied with 2000GTL. The other speaker is available for use of optional speaker CA-2000 (available through your authorized COBRA DEALER.)

Section IV
Operation

CONTROLS AND INDICATORS

There are 25 controls, 2 meters, 8 indicators and 3 jacks on the front panel of your COBRA 2000GTL.



A. CONTROL FUNCTIONS

1. **POWER SWITCH.** Press in to turn on radio. Press in knob all the way and release to turn off radio.

2. **DYNAMIKE PLUS.** Adjusts the microphone gain in the transmit and PA modes. This controls the gain to the extent that full talk power is available several inches away from the microphone. In the public address (PA) mode the control functions as the volume control.

3. **VOLUME.** Turn clockwise to set the desired listening level.

4. **SQUELCH.** This control is used to cut off or eliminate receiver background noise in the absence of an incoming signal. For maximum receiver sensitivity the control should be adjusted only to the point where the receiver background noise or ambient background noise is eliminated. Turn fully counterclockwise then slowly clockwise until receiver noise disappears. Any signal to be received must now be slightly stronger than the average received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting.

5. **RF GAIN.** Adjust as required to optimize the signal. This control is used primarily to optimize reception in strong signal areas. Gain is reduced by counterclockwise rotation of the control.

6. **SWR CAL CONTROL.** In order for you to achieve maximum radiated power and the longest range, it is important that your antenna be in good condition, properly adjusted and matched to your transceiver. The built-in SWR (standing wave ratio) meter lets you easily measure your antenna condition. To operate this function, connect your antenna to the transceiver antenna output connector. Select a channel near the middle of the band such as 21, or the channel you plan to use most frequently. Turn the power on and set the meter function switch to the CAL position. Press and hold the microphone push-to-talk button; using the SWR CAL control, adjust the meter to read the CAL position indicated on the meter face. Then, without releasing the microphone button, switch the meter function switch to the SWR position and read the SWR indicated. The lower the figure, the better, with 1 being ideal. Generally speaking, readings up to 3 are acceptable, but over 3 indicates that you are losing radiated power and antenna adjustment may be advisable.

7. **TONE.** This control is used to shape the audio response to the operators preference. Base is increased by counterclockwise rotation and treble is increased by clockwise rotation.

8. **VOICE LOCK FINE/COARSE.** Allows variation of the receiver operating frequencies above and below the assigned frequency. Although this control is intended primarily to tune in SSB signals it may be used to optimize AM signals.

9. **MODE SWITCH (LSB/AM/USB).** This switch selects AM (Amplitude Modulation), USB (Upper Side Band) or LSB (Lower Side Band) mode of operation. The Mode selector switch changes the mode of operation of both the transmitter and receiver simultaneously.

10. **CHANNEL SELECTOR.** This switch selects any one of the forty Citizens Band channels desired. The selected channel appears on the LED readout directly to the left of the Channel Selector knob. Channel 9 has been reserved by the FCC for emergency communications involving the immediate safety of life of individuals or immediate protection of property. Channel 9 may also be used to render assistance to a motorist.

11. **SPEAKER SWITCH (SP1/SP1+2/SP2).** Use this switch to select either or both speakers.

12. **OFF/ANL SWITCH.** In the ANL position, the noise reduction circuits of the Automatic Noise Limiter are activated.

13. **OFF/NB SWITCH.** When the switch is placed in the NB position the RF noise blanker is activated. The RF noise blanker is very effective for repetitive impulse noise such as ignition interference.

14. **PA/CB SWITCH.** Selects the mode of operation. In the CB position, the PA function is disabled and the unit will transmit and receive on the selected frequency. The PA function should not be used unless a PA speaker is connected.

    To use this PA feature, a speaker having a voice coil impedance of 8 ohms and a power handling capability of at least four watts should be used. This speaker must be plugged into the PA SPKR jack at the rear of the transceiver. Be sure that there is physical separation between the microphone and the speaker itself. If the speaker is located close to the microphone, acoustic feedback will result when the public address system is operated at high volume. Some experimentation will determine the minimum amount of isolation required for a given sound level from the public address system. In the PA mode, incoming CB transmission will be heard through the PA speaker.

NOTE

PA volume is controlled by adjusting the DYNAMIKE PLUS CONTROL to the desired volume.

15. **SWR/SWR CAL/% MOD SWITCH.** In the % MOD position, the MOD and RF meters are activated. When in the SWR or SWR CAL positions the SWR meter is activated.

16. **PRESS-TO-TALK MICROPHONE.** The receiver and transmitter are controlled by the press-to-talk switch on the microphone. Press the switch and the transmitter is activated; release switch to receive. When transmitting, hold the microphone two inches from the mouth and speak clearly in a normal "voice". The radios come complete with a low-impedance 500-ohm dynamic microphone. For installation instructions on other microphones, See, "ALTERNATE MICROPHONES AND INSTALLATION."

17. **PHONES.** For your individual listening with head phones.

18. **AUX OUTPUT.** Both transmit and received messages may be monitored from the output.

19. **SEPARATE SPEAKER CABINET.** Allows you to set speaker in the most convenient location.

B. INDICATOR FUNCTIONS

MODULATION METER. Indicates the percent modulation.

> **NOTE**
>
> The SWR/SWR CAL/%MOD switch must be in the %MOD position to read modulation.

SWR METER. Measures the ratio of standing wave voltage of the antenna system. Used to properly adjust the length of the antenna, and to monitor the quality of the coaxial cable and all RF electrical connections. If there is any degradation whatsoever in any of the above, due to humidity, salt spray, vibration or corrosion. the SWR meter reading will rise, thereby indicating that a problem exists.

To calibrate, switch to the "SWR CAL" position. Transmit by pressing the mike switch, and adjust the SWR control to the "CAL" mark on the meter. Then switch to "SWR" position for the SWR measurement.

S/RF METER. Indicates output power and incoming signal strength.

CHANNEL INDICATOR. The selected channel appears on the LED readout directly to the left of the channel selector knob.

RECEIVE INDICATOR. Lit while in the receive mode.

ON THE AIR. Lit while in the transmit mode.

MODE INDICATOR LSB/AM/USB. Lit when set by mode selector.

C. OPERATING PROCEDURE TO RECEIVE

1. Place the PA/CB switch in the CB position.
2. Turn the set ON by depressing the POWER switch.
3. Adjust the VOLUME for a comfortable listening level.
4. Set the Channel selector switch to the desired channel.
5. Set the RF GAIN fully clockwise.
6. Set the Mode Selector to desired mode for LSB, AM or USB.
7. Adjust the VOICE LOCK control to clarify the SSB signals or to optimize AM signals.
8. Listen to the background noise from the speaker. Turn the SQUELCH control slowly clockwise, until the noise JUST disappears. (No signal should be present.) Leave the control at this setting. The SQUELCH is now properly adjusted. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some of the weaker signals will not be heard.

D. OPERATING PROCEDURE TO TRANSMIT

1. Select the desired channel of transmission.
2. Set the DYNAMIKE PLUS control fully clockwise.
3. If the channel is clear, depress the push-to-talk switch on the microphone and speak in a normal voice.

   The S-RF meter will indicate relative power output and the modulation meter will indicate percentage of modulation as you speak into the microphone.

CAUTION

Be sure the antenna is properly connected to the radio before transmitting. Prolonged transmitting without an antenna or a poorly matched antenna could cause damage to the transmitter.

E. FREQUENCY COUNTER/LED DIGITAL CLOCK

1. Located on right hand side of the counter/clock is the time and MHz indicator. This indicator identified the mode display.

2. Located on the left hand side of the counter/clock is the AM and PM indicators.

3. The flashing colon indicates seconds.

For the proper procedure to set your LED clock, there are the following features:

TIME SET - 3 switches (used to set time)
DYNALERT - 3 switches (used to set alarm and radio)
COUNTER/CLOCK - 3 switches (used to select display)

Follow the instructions as listed below:

TIME SET

TIME SET SWITCH - Depress this switch with hour switch or minute switch for setting correct time.

HOUR SWITCH - Depress this switch at the same time with time set switch to get correct hour setting.

MINUTE SWITCH - Depress this switch at the same time with time set switch to get correct minutes setting.

DYNALERT

SET SWITCH - Depressing this switch first then following the time set procedure (do not depress time set switch) will set your alarm. After alarm is set release switch so the clock will function normally.

ALARM SWITCH - Depressing this switch causes the alarm to sound at a preselected time. Release switch to shut alarm off. Alarm will also go off automatically after one (1) minute if you choose not to release switch.

RADIO SWITCH - Depressing the radio switch will cause the radio to turn on at the preselected time. Depress switch to turn the radio off.

COUNTER/TIME

COUNTER SWITCH	-	Depressing this switch causes the receiver frequency to be displayed in the receive mode and the transmitter frequency to be displayed in the transmit mode.
AUTO SWITCH	-	Depressing this switch causes the time to be displayed in the receive mode and the transmitter frequency to be displayed in the transmit mode.
TIME SWITCH	-	Depressing this switch causes the time to be displayed continuously.

RECEIVING SSB SIGNALS

There are three types of signals presently used for communications in the Citizens Band: AM, USB, and LSB. When the MODE switch on your unit is placed in the AM position, only standard double-sideband, full carrier signals will be detected. An SSB signal may be recognized while in the AM mode by its characteristic "Donald Duck" sound and the inability of the AM detector to produce an intelligible output. The USB and LSB modes will detect upper sideband and lower sideband respectively, and standard AM signals.

SSB reception differs from standard AM reception in that the SSB receiver does not require a carrier or opposite sideband to produce an intelligible signal. A single-sideband transmitted signal consists only of the upper or the lower sideband and no carrier is transmitted. The elimination of the carrier from the AM signal helps to eliminate the biggest cause of whistles and tones heard on channels which make even moderately strong AM signals unreadable. Also, SSB takes only half of an AM channel, therefore two SSB conversations will fit into each channel, expanding the 40 AM channels to 80 SSB channels. The reduction in channel space required also helps in the receiver because only *half* of the noise and interference can be received with 100% of the SSB signal.

An SSB signal may be received only when the listening receiver is functioning in the same mode. In other words, an upper sideband signal (USB) may be made intelligible *only* if the receiver is functioning in the USB position.

If a lower sideband (LSB) signal is heard when the receiver is in the USB mode, no amount of tuning will make the signal intelligible. The reason for this may be understood if you consider that when modulation is applied to the transmitter's microphone in the USB mode, the transmitter's output frequency is increased whereas in the LSB mode the transmitter's output frequency is decreased. The result in listening to the receiver is that when the MODE switch is in the proper position (either USB or LSB), a true reproduction of single tone of modulation will result, and if the tone is increased in frequency (such as a low-pitched whistle to a high-pitched whistle) you will hear the increase in the output tone of the receiver. If the incorrect mode is selected, an increase in tone of a whistle applied to the transmitter will cause a decrease in the resultant tone from the receiver.

Thus when a voice is used in place of a whistle or tone, in the proper listening mode the voice will be received correctly whereas in the incorrect mode, the voice will be translated backwards and cannot be made intelligible by the voice lock control. When listening to an AM transmission, a correct sideband is heard in either mode since both upper and lower sideband are received.

Once the desired SSB mode has been selected, frequency adjustment may be necessary in order to make the incoming signal intelligible. the VOICE LOCK control allows the operator to vary frequency above and below the exact-center frequency of the received signal. If the sound of the incoming signal is high or low pitched, adjust the operation of the VOICE LOCK. Consider it as performing the same function as a phonograph speed control. When the speed is set too high, voices will be high-pitched and if set too low, voices will be low-pitched. Also, there is only *one* correct speed that will make a particular record produce the same sound that was recorded. If the record is played on a turntable that rotates in the wrong direction (opposite sideband) no amount of speed control (VOICE LOCK) will produce an intelligible sound.

An AM signal received while listening in one of the SSB modes will produce a steady tone (carrier) in addition to the intelligence, unless the SSB receiver is tuned to exactly the same frequency by the VOICE LOCK control. For simplicity it is recommended that the AM modes be used to listen to AM signals.

Section V
Maintenance and Adjustment

The COBRA 2000GTL transceiver is designed specifically for use as a base station and may also be used in mobile installation. The use of all solid state circuitry and light weight result in high reliability. Should a failure occur, however, replace parts *only* with identical parts. Do *not* substitute. Refer to the schematic diagram and parts list.

NOTE

If the performance described in the OPERATION and MAINTENANCE AND ADJUSTMENT sections is not obtained, review the operating instructions to insure that proper procedures were followed. If a problem still exists, refer to WARRANTY SERVICE INSTRUCTIONS elsewhere in this manual.

FCC WARNING

Federal law required that adjustment of the radio frequency section of this transceiver may not be made by a Citizens Band operator. Only a United States licensed First or Second Class commercial license holder may tune the transmitter section of this transceiver, per FCC Plain English CB Rule 41.

Section VI
Appendix

Citizens Band radio operators have largely adopted the "10-code" for standard questions and answers. Its use permits faster communications and better understanding in noisy areas. The following table lists some of the more common codes and their meanings.

10 CODE

Code	Meaning
10-1	Receiving poorly
10-2	Receiving well
10-3	Stop transmitting
10-4	OK, message received
10-5	Relay message
10-6	Busy, stand by
10-7	Out of service, leaving air
10-8	In service, subject to call
10-9	Repeat message
10-10	Transmission completed, standing by
10-11	Talking too rapidly
10-12	Visitors present
10-13	Advise Weather/Road conditions
10-16	Make pick up at
10-17	Urgent business
10-18	Anything for us?
10-19	Nothing for you, return to base
10-20	My location is
10-21	Call by telephone
10-22	Report in person to
10-23	Stand by
10-24	Completed last assignment
10-25	Can you contact
10-26	Disregard last information
10-27	I am moving to channel
10-28	Identify your station
10-29	Time is up for contact
10-30	Does not conform to FCC rules
10-32	I will give you a radio check
10-33	EMERGENCY TRAFFIC
10-34	Trouble at this station
10-35	Confidential information
10-36	Correct time is
10-37	Wrecker needed at
10-38	Ambulance needed at
10-39	Your message delivered
10-41	Please turn to channel
10-42	Traffic accident at
10-43	Traffic Tie up at
10-44	I have a message for you
10-45	All units within range please report
10-50	Break channel
10-60	What is next message number?
10-62	Unable to copy, use phone
10-63	Net directed to
10-64	Net clear
10-65	Awaiting your next message/assignment
10-67	All units comply
10-70	Fire at

10 CODE (Continued)

Code	Meaning
10-71	Proceed with transmission in sequence
10-77	Negative contact
10-81	Reserve hotel room for
10-82	Reserve room for
10-84	My telephone number is
10-85	My address is

Code	Meaning
10-91	Talk closer to mike
10-93	Check my frequency on this channel
10-94	Please give me a long count
10-99	Mission completed, all units secure
10-200	Police needed at

A FEW RULES THAT SHOULD BE OBEYED

1. You must identify your official licensed call sign at the beginning and end of every conversation.

2. You are not allowed to carry on a conversation with another station for more than five minutes at a time without taking a one-minute break, to give others a chance to use the channel.

3. You are not allowed to blast others off the air by over-powering them with illegally amplified transmitter power, or illegally high antennas.

4. You can't use CB to promote illegal activities.

5. You are not allowed to use profanity.

6. You may not play music in your CB.

7. You may not use your CB to sell merchandise or professional services.

HOW YOUR CB CAN SERVE YOU

- Warn of traffic tie ups ahead.
- Provide weather and road information.
- Provide help fast in event of emergency or breakdown.
- Suggest good spots to eat and sleep.
- Make long trips more interesting, and help keep you awake.
- Provide direct contact with your office or home.
- Make friends for you as you travel.
- Provide "local information" to find your destination.
- Help law enforcement officers by reporting drunk and reckless drivers.

Colonel Samuel S. Smith of the Missouri Highway Patrol called the number of drunken drivers, wrong-way drivers and speeders reported by CBers as "amazing." He said, that even the "Smokey Bear" warnings don't shake their beliefs that "the potential benefits of CB radio to law enforcement are so great that they far outweigh the disadvantages." In regards to CB radar warnings to other CBers, Colonel Smith said cheerfully that "We've overheard warnings being relayed to truckers long after our operations have been discontinued . . . so we actually receive a residual benefit from these warnings."

USE CHANNEL 9 FOR EMERGENCY MESSAGES ONLY

FCC gives the following examples of permitted and prohibited types of communications for use on Channel 9. These are guidelines and are not intended to be all-inclusive.

Permitted	Example Message
Yes	"A tornado sighted six miles north of town."
No	"This is observation post number 10. No tornado sighted."
Yes	"I am out of gas on Interstate 95."
No	"I am out of gas in my driveway."
Yes	"There is a four-car collision at Exit 10 on the Beltway, send police and ambulance."
No	"Traffic is moving smoothly on the Beltway."
Yes	"Base to Unit 1, the Weather Bureau has just issued a thunderstorm warning. Bring the sailboat into port."
No	"Attention all motorists. The Weather Bureau advises that the snow tomorrow will accumulate 4 to 6 inches."
Yes	"There is a fire in the building on the corner of 6th and Main Streets."
No	"This is Halloween patrol unit number 3. Everything is quiet here."

WARRANTY SERVICE INSTRUCTIONS

1. Refer to the MAINTENANCE section of your Cobra instruction manual for adjustments that may be applicable.

2. If the above-mentioned procedures do not correct the problem you are experiencing with your unit, pack it securely (preferably in the original carton or double-packed). Enclose a letter describing the problem and include your name and address. Deliver to, or ship PREPAID (UPS preferred) to the nearest Cobra authorized service agency (see list enclosed with unit).

If your list of authorized Cobra service agencies has been misplaced, contact your local dealer for the name of your nearest service agency, or write to:

Service Department

Cobra Product Group
DYNASCAN CORPORATION
2815 West Irving Park Road
Chicago, Illinois 60618

LIMITED 90-DAY WARRANTY

DYNASCAN CORPORATION warrants to the original purchaser that its COBRA Citizens Band Radios, and the component parts thereof, will be free from defects in workmanship and materials for a period of ninety (90) days from the date of purchase.

DYNASCAN will, without charge, repair or replace, at its option, defective radios or component parts upon delivery to an authorized COBRA service contractor or the factory service department, accompanied by proof of the date of purchase in the form of a sales receipt.

To obtain warranty coverage, this CB radio must be registered by completing and mailing the enclosed warranty registration card to DYNASCAN Cobra Communications, P. O. Box 35148, Chicago, Illinois 60635 within five (5) days from the date of purchase.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. It is void if the serial number is altered, defaced or removed.

As indicated in your product instruction booklet, certain COBRA models are suitable for dash board installation without modification of the dash. In other cases professional installation is recommended. In either event, DYNASCAN is not responsible for damages to the product or the automobile resulting from improper installation.

DYNASCAN shall not be liable for any consequential damages, including without limitation damages resulting from loss of use or cost of installation. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may also have other rights which vary from state to state.

For your convenience we suggest you contact your dealer, who may be authorized to make repairs or can refer you to the nearest service contractor. If warranty service cannot be obtained locally, please send the unit to Cobra Communications Service, 2815 West Irving Park Road, Chicago, Illinois 60618, properly packaged to avoid damage in shipment.

For future reference, jot down the serial number (shown on the FCC identification plate of your COBRA 2000GTL) below:

SERIAL NO.________________________________

Cobra Communications Product Group

DYNASCAN CORPORATION

6460 W. Cortland Street

Chicago, Illinois 60635

480-236-9-001

Printed in Taiwan